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EXAMINER

KIM, PAUL

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



### **DETAILED ACTION**

1. This Office action is responsive to the following communication: Amendment filed on 14 February 2008.
2. Claims 1-19 and 21-32 are pending and present for examination.

#### ***Response to Amendment***

3. Claims 1, 19, and 24 have been amended.
4. No claims have been cancelled.
5. No claims have been added.

#### ***Claim Objections***

6. **Claims 21-22** are objected to because of the following informalities: Both claims are recite a dependency on a cancelled claim (i.e. claim 20). Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1, 10 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Helgeson (U.S. Patent No. 6,643, 652, hereinafter referred to as HELGESON), filed on January 12, 2001, published on June 13, 2002, and issued on November 4, 2003, in view of Fernandez (U.S. Patent No. 6,785,673, hereinafter referred to as FERNANDEZ), filed on December 28, 2001, and issued on August 31, 2004.
9. **As per independent claim 1**, HELGESON, in combination with FERNANDEZ, discloses:

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A method for exporting at least a portion of a relational database to an XML document, comprising the steps of:

obtaining an initial view query that defines an XML view on said relational database *{See FERNANDEZ, C2:L65-67, wherein this reads over "a general, dynamic, and efficient tool for viewing and querying relational data in XML"; and C3:L23-54, wherein this reads over "an algorithm is provided for efficiently constructing materialized XML views of relational databases"}* and an XSLT stylesheet specifying at least one transformation *{See HELGESON, col. 51, lines 32-34, wherein this reads over "an XSLT stylesheet that transforms the model into a specific presentation environment"; and col. 65, lines 45-55, wherein this reads over "[t]he default XSLT processor that comes with Cocoon performs a single XSLT transformation only"}*;

modifying said initial view query to account for an effect of said at least one transformation *{See HELGESON, col. 49, lines 46-53, wherein this reads over "Style Sheet Control System 810 contains mechanisms to manipulate various kinds of display style sheets . . . and also can allow vendors/developers to modify . . . the mechanisms"; and col. 73, line 29 – col. 74, line 24, wherein this reads over "wdk taglibrary . . . includes tags for . . . managing the input and output parameters to the model page"}*; and

applying said modified view query to said relational database to obtain said XML document *{See HELGESON, col. 80, lines 51-55, wherein this reads over "[m]odel pages are responsible for producing an XML representation of the content of the page . . . [by] executing complex business logic (e.g., running database queries)"}*.

The combination of inventions disclosed in HELGESON and FERNANDEZ would disclose an invention which would comprise of a method wherein an initial view query is modified and applied to a relational database such that the application of the modified view query would result in the obtaining of an XML document. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by HELGESON by combining it with the invention disclosed by FERNANDEZ.

One of ordinary skill in the art would have been motivated to do this modification in order to obtain an XML document according to the transformation specified by an XSLT stylesheet.

10. **As per independent claim 10**, HELGESON, in combination with FERNANDEZ, discloses:

A method for generating a modified view query of an XML document, comprising the step of:

composing an XSLT stylesheet *{See HELGESON, col. 51, lines 32-34, wherein this reads over "an XSLT stylesheet that transforms the model into a specific presentation environment"; and col. 65, lines 45-55, wherein this reads over "[t]he default XSLT processor that comes with Cocoon performs a single XSLT transformation only"}* with an XML view on a relational database to produce said modified view query *{See FERNANDEZ, C2:L65-67, wherein this reads over "a general, dynamic, and efficient tool for viewing and querying relational data in XML"; and C3:L23-54, wherein this reads over "an algorithm is provided for efficiently constructing materialized XML views of relational databases"}*.

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The combination of inventions disclosed in HELGESON and FERNANDEZ would disclose an invention which would comprise of a method wherein an initial view query is modified and applied to a relational database such that the application of the modified view query would result in the obtaining of an XML document. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by HELGESON by combining it with the invention disclosed by FERNANDEZ.

One of ordinary skill in the art would have been motivated to do this modification in order to obtain an XML document according to the transformation specified by an XSLT stylesheet.

11. **As per independent claim 24**, HELGESON, in combination with FERNANDEZ, discloses:

A system for exporting at least a portion of a relational database to an XML document, comprising:

a memory *{See HELGESON, col. 3, lines 11-14, wherein this reads over "memory storing data"};*  
and

at least one processor, coupled to the memory *{See HELGESON, col. 3, lines 11-14, wherein this reads over "a processor coupled to the memory"};* operative to:

obtain an initial view query that defines an XML view on a relational database *{See FERNANDEZ, C2:L65-67, wherein this reads over "a general, dynamic, and efficient tool for viewing and querying relational data in XML"; and C3:L23-54, wherein this reads over "an algorithm is provided for efficiently constructing materialized XML views of relational databases"} and an XSLT stylesheet specifying at least one transformation {See HELGESON, col. 51, lines 32-34, wherein this reads over "an XSLT stylesheet that transforms the model into a specific presentation environment"; and col. 65, lines 45-55, wherein this reads over "[t]he default XSLT processor that comes with Cocoon performs a single XSLT transformation only"};*

modify said initial view query to account for an effect of said at least one transformation *{See HELGESON, col. 49, lines 46-53, wherein this reads over "Style Sheet Control System 810 contains mechanisms to manipulate various kinds of display style sheets . . . and also can allow vendors/developers to modify . . . the mechanisms"; and col. 73, line 29 – col. 74, line 24, wherein this reads over "wdk taglibrary . . . includes tags for . . . managing the input and output parameters to the model page"};* and

apply said modified view query to said relational database to obtain said XML document *{See HELGESON, col. 80, lines 51-55, wherein this reads over "[m]odel pages are responsible for producing an XML representation of the content of the page . . . [by] executing complex business logic (e.g., running database queries)}.*

The combination of inventions disclosed in HELGESON and FERNANDEZ would disclose an invention which would comprise of a method wherein an initial view query is modified and applied to a

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relational database such that the application of the modified view query would result in the obtaining of an XML document. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by HELGESON by combining it with the invention disclosed by FERNANDEZ.

One of ordinary skill in the art would have been motivated to do this modification in order to obtain an XML document according to the transformation specified by an XSLT stylesheet.

12. **Claims 2 and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over HELGESON, in view of FERNANDEZ, and in further view of Chau et al (USPGPUB 2002/0123993, hereinafter referred to as CHAU), filed on November 29, 2000, and published on September 5, 2002.

HELGESON and FERNANDEZ disclose the limitations of claims 1, 10, and 24 for the reasons stated above.

HELGESON and FERNANDEZ differ from the claimed invention in that they fail to disclose a method wherein the XSLT stylesheet is based on a restrictive subset of XSLT (claims 2 and 25).

13. **As per dependent claims 2 and 25**, HELGESON, in combination with FERNANDEZ and CHAU, discloses a method wherein said XSLT stylesheet is based on a restrictive subset of XSLT *{See CHAU, Para. 0096, wherein this reads over "XML System uses a subset of Extensive Stylesheet Language Transformation (XSLT) . . . to identify XML elements or attributes"; and Para.0693, wherein "XML System adapts the notation used in Xpath and uses a subset of it to defined the XML document structure" reads on "the match pattern of a template rule, match(r.sub.i), is a pattern and is essentially a subset of XPATH path expressions"}*.

The combination of inventions disclosed in HELGESON, FERNANDEZ, and CHAU would disclose an invention which would comprise of a method wherein the XSLT stylesheet specifying the transformation would be based on a restrictive subset of XSLT. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by HELGESON and FERNANDEZ by combining it with the invention disclosed by CHAU.

One of ordinary skill in the art would have been motivated to do this modification in order to cover a reasonable variety of XSLT stylesheets applied to XML-publishing views.

14. **Claims 3, 11, and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over HELGESON, in view of FERNANDEZ, and in further view of Jones (USPGPUB 2004/0010754, hereinafter referred to as JONES), filed on May 2, 2003, and published on January 15, 2004, and in further view of O'Carroll (U.S. Patent No. 6,772,165, hereinafter referred to as O'CARROLL), filed on November 15, 2002, and issued on August 3, 2004.

HELGESON and FERNANDEZ disclose the limitations of claims 1, 10, and 24 for the reasons stated above.

HELGESON and FERNANDEZ differ from the claimed invention in that they fail to disclose a method comprising the steps of generating graphs representing processing done by an XSLT stylesheet, and combining the graphs by matching pairs of nodes thereafter (claims 3, 11, and 26).

15. **As per dependent claims 3, 11, and 26**, HELGESON, in combination with FERNANDEZ, JONES and O'CARROLL, discloses a method comprising the steps of generating a first graph representing processing done by an XSLT stylesheet *{See JONES, Para. 0029, wherein this reads over "Type analysis for XSLT is therefore a special case of type analysis for Xpath. . . . [A] tree of nodes (Xpath Tree 600 in FIG.#) is used to represent each Xpath expression after it has been parsed from its string form"}}, and combining the first graph with a second graph representing the initial view query by matching pairs of nodes from the first and second graphs *{See O'CARROLL, Figs. 1 and 9-11; col. 3, lines 40-50, wherein this reads over "merging the source trees to provide a target tree . . . [by] identifying matching nodes (X, Y, Z) in at least two source trees; inserting a single node corresponding to the matching nodes in the target tree"}.**

The combination of inventions disclosed in HELGESON, FERNANDEZ, JONES, and O'CARROLL would disclose an invention which would comprise of a method wherein a first graph, specifically a tree, representing processing done by an XSLT stylesheet is generated, and the source trees (i.e. the first graph and second graph) are merged by identifying and matching pairs of nodes in the graphs.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by HELGESON and FERNANDEZ by combining it with the invention disclosed by JONES and O'CARROLL.

One of ordinary skill in the art would have been motivated to do this modification in so that the combined graph may be pruned to remove unnecessary nodes and modified to produce a modified view query that handles formatting instructions

16. **Claims 6, 15 and 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over HELGESON, in view of FERNANDEZ, JONES and of O'CARROLL, in further view of Bernstein et al (U.S. Patent No. 6,826,568, hereinafter referred to as BERNSTEIN), filed on December 20, 2001, and issued on November 30, 2004, and in further view of Mani et al (U.S. Patent No. 6,654,734, hereinafter referred to as MANI), filed on August 30, 2000, and issued on November 25, 2003.

HELGESON and FERNANDEZ teach the limitations of claims 1, 10, and 24 for the reasons stated above.

HELGESON and FERNANDEZ differ from the claimed invention in that they fail to disclose a method for generating a modified view query of an XML document (claim 19).

HELGESON and FERNANDEZ differ from the claimed invention in that they fail to disclose a method wherein the combined graph is pruned to remove unnecessary nodes, and is modified to produce a modified view query that handles formatting instructions (claims 6, 15, and 29).

HELGESON and FERNANDEZ differ from the claimed invention in that they fail to disclose a method wherein formatting instructions are expressed as output tag trees for each node in a traverse view query (claims 8, 17, and 23)

17. **As per dependent claims 6, 8, 15, 17, 23, and 29**, HELGESON, in combination with FERNANDEZ, JONES, O'CARROLL, BERNSTEIN and MANI, discloses a method wherein the combined graph is pruned to remove unnecessary nodes *{See BERNSTEIN, col. 19, line 63 – col. 20, lines 1, wherein this reads over "a pruning leaves process is provided . . . [because] leaves increase the*



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*computation time, even though many of them are irrelevant for matching"}, and is modified to produce a modified view query that handles formatting instructions {See MANI, col. 4, lines 37-38, wherein this reads over "Tags: Codes (as in HTML or XML) that give instructions for formatting"}.*

The combination of inventions disclosed in HELGESON, FERNANDEZ, JONES, O'CARROLL, BERNSTEIN, and MANI would disclose an invention which would comprise of a method wherein the leaves of the combined graph are pruned, and the combined graph is modified to produce a modified view query that handles formatting instructions. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by HELGESON by combining it with the invention disclosed by FERNANDEZ, JONES, O'CARROLL, BERNSTEIN, and MANI.

One of ordinary skill in the art would have been motivated to do this modification in so that the computation time may be decreased through pruning, and a modified view query may be later applied to the relational database to obtain the XML document.

18. **As per dependent claims 8, 17 and 23**, HELGESON, in combination with JONES, O'CARROLL, BERNSTEIN, MANI, and FERNANDEZ, discloses a method wherein said formatting instructions are expressed as output tag trees for each node {See O'CARROLL, Figure 2(b); and col. 4, lines 45-47, wherein this reads over "a parsing step 6 in which the syntax of the source document 2 is parsed to generate a hierarchical structure tree 7 of nodes"} in said traverse view query {See FERNANDEZ, Figure 3; and col. 6, lines 51-60, wherein this reads over "a view query that defines the XML virtual view of the database, . . . [specifically] an RXL query"}, and further comprising the step of combining said output tag trees and said traverse view query to generate said modified view query {See FERNANDEZ, col. 6, line 65 – col. 7, line 4, wherein this reads over "the view query and the user query can be passed to the query composer module 102 . . . which computes the composition and produces a new view query"}.

The combination of inventions disclosed in HELGESON, JONES, O'CARROLL, BERNSTEIN, MANI, and FERNANDEZ would disclose an invention which would comprise of a method wherein formatting

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instructions are expressed as output tag trees for each node in a traverse view query, and wherein the output tag trees and the traverse view query are combined to generate a modified view query.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by HELGESON by combining it with the invention disclosed by JONES, O'CARROLL, BERNSTEIN, MANI, and FERNANDEZ.

One of ordinary skill in the art would have been motivated to do this modification in so that a modified view query may be first generated using output tag trees and a traverse view query, and later applied to the relational database to obtain the XML document.

19. **Claims 9, 18, and 32** are rejected under 35 U.S.C. 103(a) as being unpatentable over HELGESON, in view of FERNANDEZ, and in further view of W3C ("XSL Transformations (XSLT), Version 1.0, hereinafter referred to as W3C), published on November 16, 1999.

HELGESON and FERNANDEZ teach the limitations of claims 1, 10, and 24 for the reasons stated above.

HELGESON and FERNANDEZ differ from the claimed invention in that they fail to disclose a method wherein the obtained XML document is similar to a second XML document produced by applying a XSLT stylesheet on the XML document produced by the initial view query (claims 9, 18, and 32).

20. **As per dependent claims 9, 18, and 32**, HELGESON, in combination with FERNANDEZ and W3C, discloses a method wherein an obtained XML document would be similar to a second XML document produced by applying the XSLT stylesheet *{See W3C, p. 3-4, wherein this reads over "[a] transformation expressed in XSLT describes rules for transforming a source tree into a result tree . . . A pattern is matched against elements in the source tree . . . A style sheet contains a set of template rules. A template rule has two parts: a pattern which is matched against nodes in the source tree and a template which can be instantiated to form part of the result tree"}*.

The combination of inventions disclosed in HELGESON, FERNANDEZ, and W3C would disclose an invention which would comprise of a method wherein applying the XSLT stylesheet to a source

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document, particularly XML documents, would result in those documents being similar in structure and format. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by HELGESON by combining it with the invention disclosed by FERNANDEZ and W3C.

One of ordinary skill in the art would have been motivated to do this modification in so that a modified view query may be first generated using output tag trees and a traverse view query, and later applied to the relational database to obtain the XML document.

### ***Allowable Subject Matter***

21. **Claims 4-5, 7, 12-14, 16, 21-22, 27-28, and 30-31** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

22. **Claim 19** is allowed.

### ***Response to Arguments***

23. Applicant's arguments filed 14 February 2008 have been fully considered but they are not persuasive.

a. Rejections under 35 U.S.C. 112

Applicant's arguments, see pages 7-9, filed 14 February 2008, with respect to claims 9, 18, 19, and 32 have been fully considered and are persuasive. The 35 U.S.C. 112 rejections of claims 9, 18, 19, and 32 have been withdrawn.

b. Rejections under 35 U.S.C. 103

Applicant asserts the argument that "Helgeson does not disclose or suggest via queries." See Amendment, page 10. The Examiner respectfully disagrees. While Applicant further asserts that a "view query" specifies a mapping between the relational tables and the resulting XML document," it is noted that the features upon which applicant relies (i.e., the mapping between

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tables and a XML document) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Secondly, Applicant asserts the argument that Helgeson and Fernandez fail to disclose "modifying said initial view query to account for an effect of said at least one transformation." See Amendment, page 10. The Examiner respectfully disagrees. Applicant is directed to Fernandez which discloses "a new query language, RXL, for mapping relational sources to XML views." See Fernandez, column 3, lines 11-22. That is, Fernandez discloses an invention wherein an RXL may be modified in accordance with the limitations of an XML-QL query to create a new RXL query. Wherein an XML-QL query can express queries as well as transformation that map data between DTDs, one of ordinary skill in the art would have been discern that the modification of an RXL query (i.e. an initial view query) with an XML-QL query (i.e. comprising of transformations) would properly read upon the claims as recited.

Lastly, Applicant asserts the argument that Helgeson and Fernandez fail to disclose or suggest "applying said modified view query to said relational database to obtain said XML document." See Amendment, page 11. The Examiner respectfully disagrees in that the claim limitation as recited only requires the application of the modified view query to a relational database. The requirement that the application be used "to obtain said XML document" is an intended use which for purposes of examination has not been provided patentable weight.

For the reasons set forth above, the rejections under 35 U.S.C. 103 are sustained.

### ***Conclusion***

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date

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of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL KIM whose telephone number is (571)272-2737. The examiner can normally be reached on M-F, 9am - 5pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on (571) 272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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| <div><b>Application Number</b></div> <div></div> | <b>Application/Control No.</b> | <b>Applicant(s)/Patent under Reexamination</b> |  |
|   | 10/626,835                     | BOHANNON ET AL.                                |  |
|   | <b>Examiner</b>                | <b>Art Unit</b>                                |  |
|   | PAUL KIM                       | 2161   |  |